

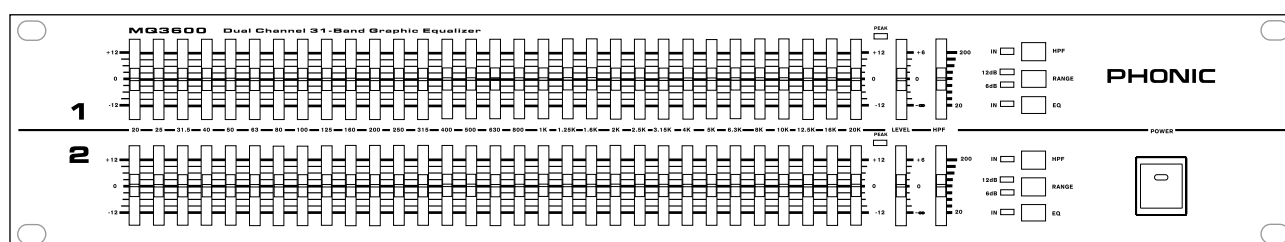
PHONIC

MQ 3300

MQ 3400

MQ 3600

GRAPHIC EQUALIZER



MQ 3600

English

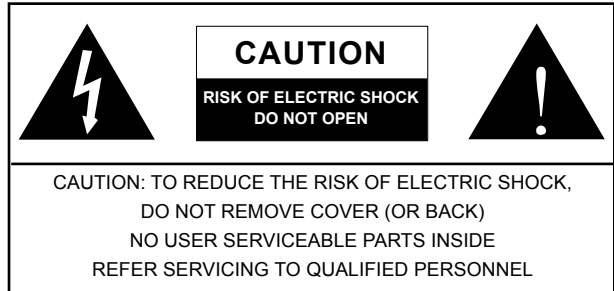
User's Manual

IMPORTANT SAFETY INSTRUCTIONS

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus. The MAINS plug is used as the disconnect device, the disconnect device shall remain readily operable.

Warning: the user shall not place this apparatus in the confined area during the operation so that the mains switch can be easily accessible.

1. Read these instructions before operating this apparatus.
2. Keep these instructions for future reference.
3. Heed all warnings to ensure safe operation.
4. Follow all instructions provided in this document.
5. Do not use this apparatus near water or in locations where condensation may occur.
6. Clean only with dry cloth. Do not use aerosol or liquid cleaners. Unplug this apparatus before cleaning.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plug, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

CAUTION: Use of controls or adjustments or performance of procedures other than those specified may result in hazardous radiation exposure.



MQ 3300/3400/3600

GRAPHIC EQUALIZER

USER'S MANUAL

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INTRODUCTION

Congratulations on your purchase of the new MQ series equalizer. This series comes in three models: MQ3600 (dual 31-band, 1/3 octave), MQ3400 (dual channel 15-band, 2/3 octave), and MQ3300 (dual channel 31-band, 1/3 octave). In order to get the best performance from your MQ series equalizer, please read this user's manual carefully and keep it for later reference. Please make sure you are completely familiar with the function and features of your new Phonic Graphic Equalizer to ensure the best performance.

FEATURES

MQ3300 31-BAND, 1/3 OCTAVE

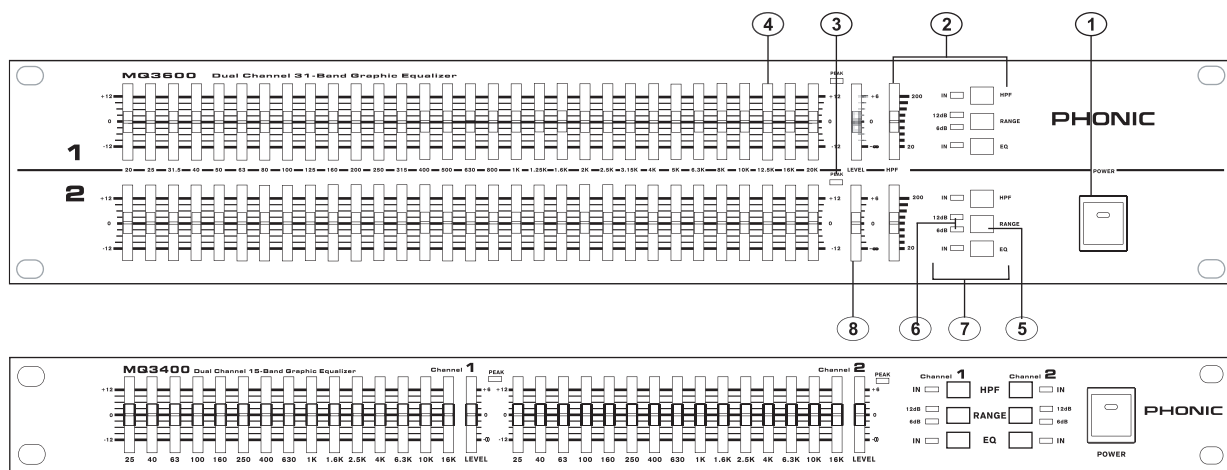
MQ3400 DUAL 15-BAND, 2/3 OCTAVE

MQ3600 DUAL 31-BAND, 1/3 OCTAVE

- Switchable HPF at 40Hz
- 20Hz to 200Hz variable high pass filter (MQ3600 only)
- Global range switch between +/-6dB and +/-12dB
- EQ IN/OUT switch
- Center-detented sliders
- Overall level control is for easy level matching with the sound system
- Separate LED displays for HPF in, 12dB/6dB range, EQ in/out, peak warning

GETTING STARTED

1. Check the AC voltage before connecting the plug. Proper grounding must be practiced to prevent electrical shock to the operator. Choose the main supply for the sound system with care, and do not share sockets or earthing with light dimmers.
2. Run audio cables separately from dimmer wiring, using balanced lines wherever possible. If necessary, cross the audio and lighting cables at right angles to minimize the possibility of interference. Keep unbalanced cabling as short as possible.
3. Check your cables regularly and label each end for easy identification.
4. Before switching on the main power, keep the input level control all the way down to prevent damage or excessive noise caused by bad level adjustment, wrong wiring, defective cables, or bad connections.
5. Always turn on this unit before the power amplifier; turn it off after turning off the amplifier.
6. Always turn off the power before connecting or disconnecting the unit.
7. Never use solvents to clean the unit. Clean with a soft, dry cloth.



FRONT PANEL DESCRIPTION

1.POWER switch with LED

Use this switch to turn the equalizer on and off. Be sure to power-up before your power amplifier is turned on to avoid loud transients which could damage your speaker or annoy your audience.

2.HPF switch with LED

HPF stands for HIGH PASS FILTER which allows the high frequencies to passthrough unchanged, while severely attenuating (cutting) the very low frequencies. Use this switch to protect your audio system from damaging low-frequency transients (loud thumps).The HPF LED will light up when the high pass filter is working. MQ 3300 and MQ 3400 both have a 40Hz high pass filter, while MQ 3600 has a sweepable high pass filter from 20Hz to 200Hz.

3.PEAK LED Indicators

The LED will light up if you set too high a level for the output and overload happens. If this LED blinks only briefly during the very loudest parts of your program, there is no problem. But if it stays on constantly for more than a couple of seconds, you might have a distorting sound. If this happens, simply turn down the level control until this LED blinks only very briefly.

4.Individual boost/cut control

Moving these sliders upward boosts their labeled frequency bands, and moving them downward cuts (decrease) them. When moving these controls past zero, you will feel the center-detent (notch) in the control which makes it very easy to find zero in a hurry, or even in the dark.

5.EQ RANGE selector switch

One of the reasons to use a graphic equalizer is that the frequencies sliders themselves form a graphic depiction of the frequency response curve you have set. But if your setting is very subtle, the graph becomes difficult to set and see. If you encounter this difficulty, simply push this RANGE selector switch.

6.EQ RANGE LED

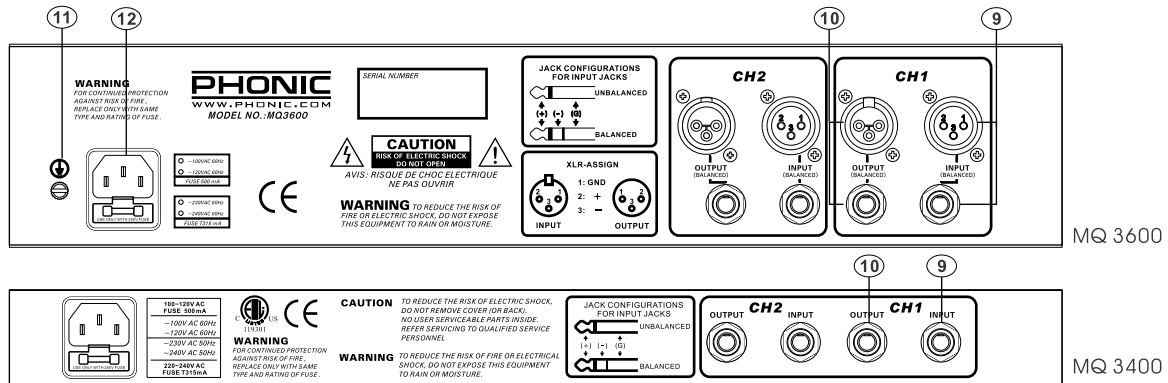
This LED will change from red to green indicating the maximum boost/cut range of the frequency sliders has been reduced from 12dB to 6dB. And you can make your adjustments, taking advantage of the greater fader travel necessary to get the same amount of boost or cut.

7.EQ IN/OUT switch with LED

This switch allows instant comparison of the original sound with the equalizer sound. The LED will go off when the equalizer is out of the circuit.

8.LEVEL control

After setting your response curve by using the individual frequency sliders, use this level control to compensate for overall changes in the audio signal level (volume).



REAR PANEL DESCRIPTION

9.Audio In

MQ3300 has one balanced 1/4"-inch jack. MQ3400 has two balanced 1/4"-inch jacks, one for each channel; while MQ3600 has an XLR male jack and a balanced 1/4"-inch jack for each channel.

10.Audio Out

MQ3300 has one balanced 1/4"-inch jack. MQ3400 has two balanced 1/4"-inch jacks, one for each channel; while MQ3600 has an XLR female jack and a balanced 1/4"-inch jack for each channel.

11.Fuse holder

Before you attempt to connect and operate this unit, please make sure that your local voltage matches the voltage indicated on the unit. Blown fuses may only be replaced by fuses of the same type and rating.

12.AC power socket

Connect the enclosed adaptor to this socket.

TYPICAL GRAPHIC EQUALIZER OPERATION

GENERAL TONE CONTROL

The graphic equalizer is a very useful device for general tone shaping because it is simple and easy to adjust. The visual reference provided by the slide fader position gives an approximate idea of the frequency response generated: the higher frequency on the right and lower frequency on the left. To use the equalizer, you need to know the numerical frequency range of the tone you want to produce. Here is a frequency range chart for your reference, which is useful for starting a new equalized experience. Use this as a guide, then adjust by ear. Unfortunately, even a good equalizer can not offer a complete solution when the room has severe, inherent acoustic problems. Also, equalization cannot overcome the lack of sound clarity caused by rooms with unduly long reverberation times.

FEEDBACK CONTROL

In live performance applications, graphic equalization is almost always applied separately to the stage monitor or foldback system to reduce the level of those frequencies that would otherwise cause feedback problems. These problems arise due to peaks in the frequency response curves of the monitor speaker system, monitor positioning, and sound reflected from the stage walls. A graphic equalizer can be used to provide some control over moderate feedback problems, but it does not have enough flexibility or resolution to handle severe situations. You will get the best results when you eliminate one or two feedback points by adjusting one or two slide faders, please cut no more than 6dB. If you find feedback points covering many equalizer bands and cutting every band does not help, then you have to reduce the system gain. The combined use of a graphic equalizer for tone control and a parametric equalizer for feedback control is highly recommended.

MIXER CHANNEL EQUALIZATION

Many mixers provide only simple equalization for individual channels. If your mixer has channel inserts, you can patch your equalizer into a channel that is being used for something important and use it to tailor the sound of this channel exactly the way you want.

LARGE ROOM EQUALIZATION

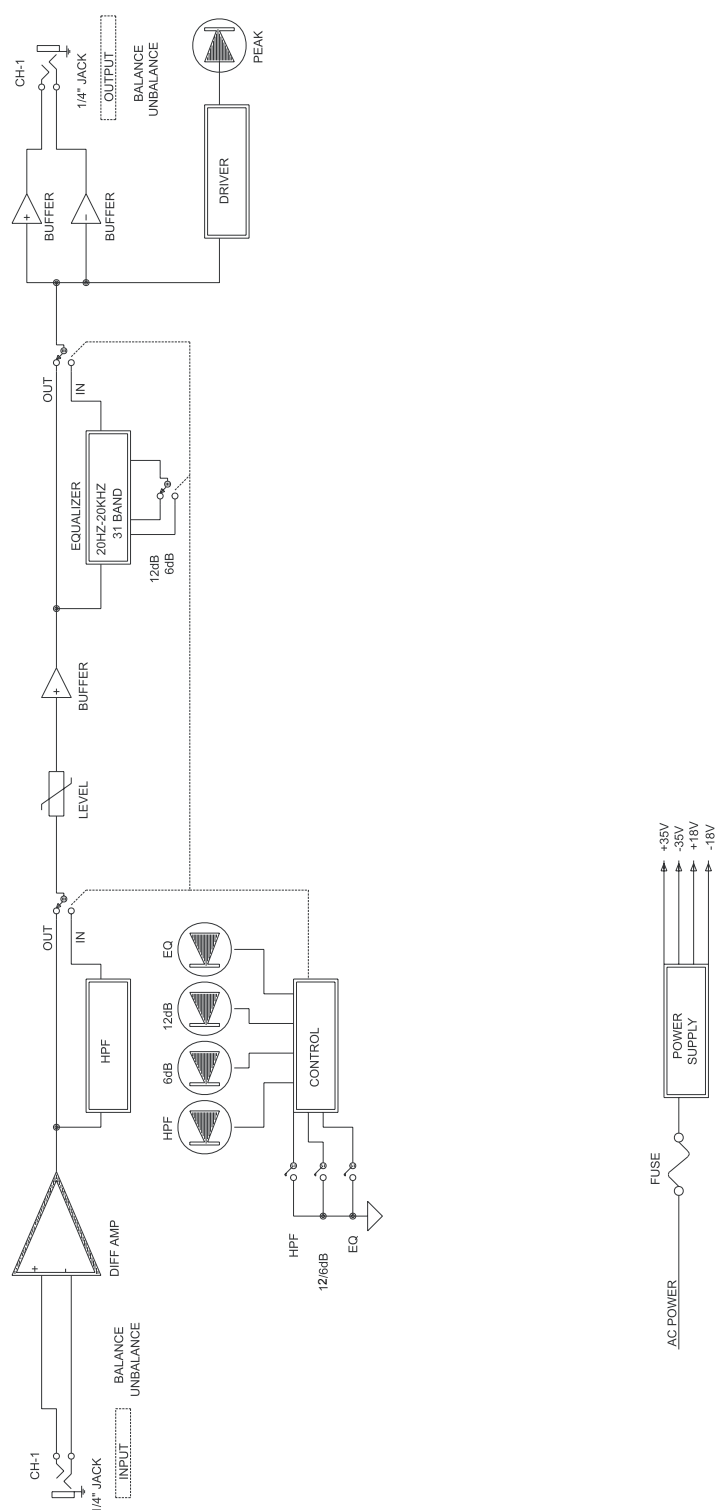
Large rooms tend to suffer from multiple reflections with long time delays and long reverberation times; all of which lead to reduced intelligibility and a generally muddy sound.

SPECIFICATIONS

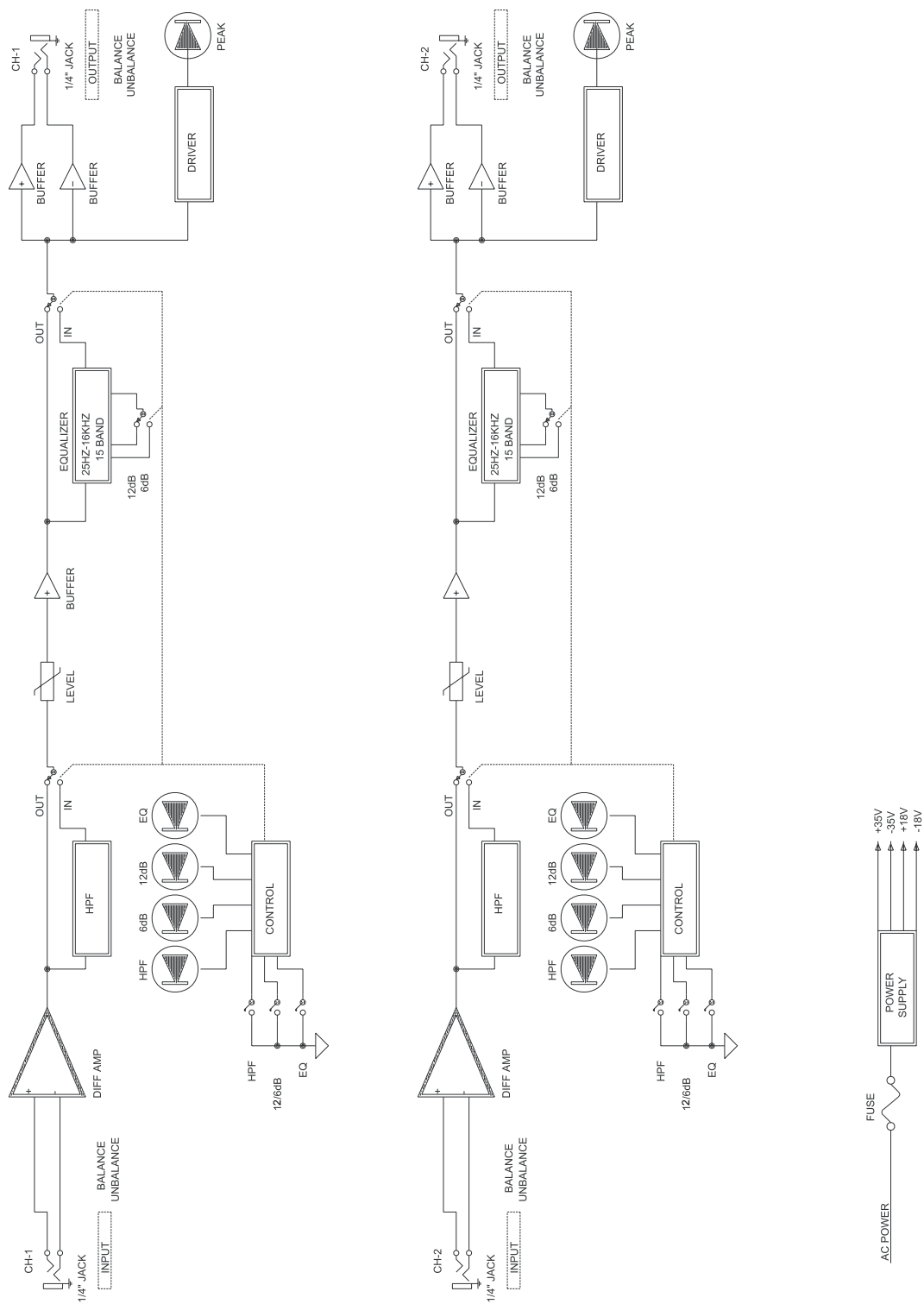
	MQ3300	MQ3400	MQ3600
INPUT	1	2	2
Format	Balanced, line level (+4dBu)		
Impedance	22k ohms		
Frequency Response 20Hz~20KHz, Flat setting EQ in	± 0.25 dB		
Gain	-12~+12dB		
THD	0.01%, @maximum output		
EQUALIZER	31-band, 1/3 octave	Dual 15-band, 2/3 octave	Dual 31-band, 1/3 octave
Center Frequency	ISO Standard, 20Hz to 20KHz	ISO Standard, 25Hz to 16KHz	ISO Standard, 20Hz to 20KHz
Range	±12dB or ±6dB global switchable		
OUTPUT			
Format	Active balanced		
Maximum output	+18dBu		
Impedance	600 ohms		
POWER			
Mains power (depend on region)	100~120, 200~240VAC, 50~60Hz		
Power Consumption	15 watts	15 watts	30 watts
Fuse	100-120 VAC: 500mA 220-240 VAC: T315mA	100-120 VAC: 500mA 220-240 VAC: T315mA	100-120 VAC: 1A 220-240 VAC: T500mA
PHYSICAL			
Case	Aluminum front panel. Steel housing		
Dimension(WxHxD)	482x44.5x210mm (19"x1.75"x8.3")	482x44.5x210mm (19"x1.75"x8.3")	482x89x270mm (19"x3.5"x10.6")
Net Weight	2.9 kg (6.4 lbs)	2.9 kg (6.4 lbs)	5.05 kg (11.1 lbs)

All specifications are subject to change without prior notice.

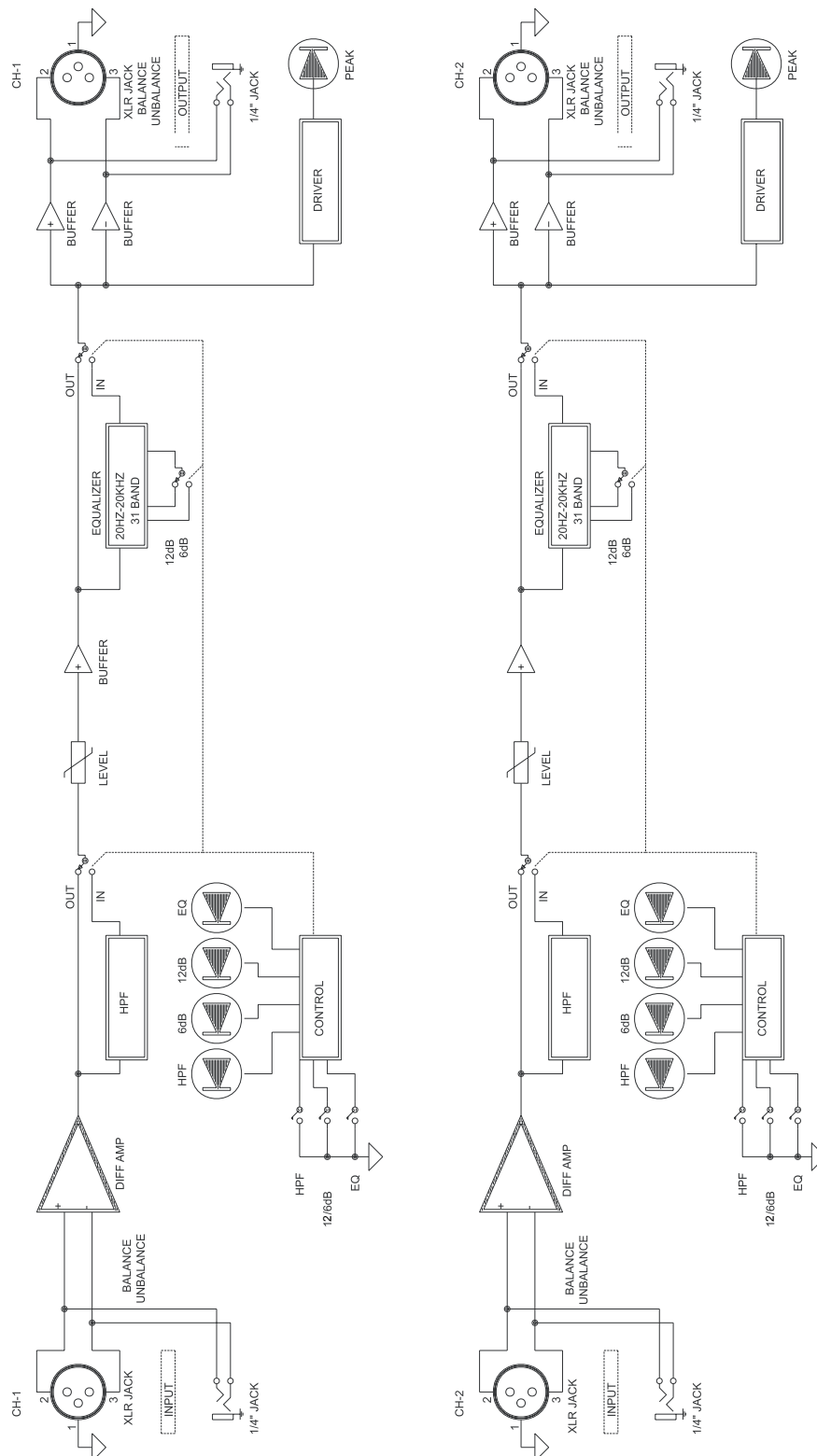
SYSTEM BLOCK DIAGRAMS



MQ3300 BLOCK DIAGRAM



MQ3400 BLOCK DIAGRAM



MQ3600 BLOCK DIAGRAM

TO PURCHASE ADDITIONAL PHONIC GEAR AND ACCESSORIES

To purchase Phonic gear and optional accessories, contact any authorized Phonic distributor. For a list of Phonic distributors please visit our website at www.phonic.com and click on Get Gear. You may also contact Phonic directly and we will assist you in locating a distributor near you.

SERVICE AND REPAIR

Phonic has over 100 service centers worldwide. For replacement parts, service and repairs please contact the Phonic distributor in your country. Phonic does not release service manuals to consumers, and advice users to not attempt any self repairs, as doing so voids all warranties. You can locate a dealer near you at www.phonic.com.

WARRANTY INFORMATION

Phonic stands behind every product we make with a no-hassles warranty. Warranty coverage may be extended, depending on your region. Phonic Corporation warrants this product for a minimum of one year from the original date of purchase against defects in material and workmanship under use as instructed by the user's manual. Phonic, at its option, shall repair or replace the defective unit covered by this warranty. Please retain the dated sales receipt as evidence of the date of purchase. You will need it for any warranty service. No returns or repairs will be accepted without a proper RMA number (return merchandise authorization). In order to keep this warranty in effect, the product must have been handled and used as prescribed in the instructions accompanying this warranty. Any tempering of the product or attempts of self repair voids all warranty. This warranty does not cover any damage due to accident, misuse, abuse, or negligence. This warranty is valid only if the product was purchased new from an authorized Phonic dealer/distributor. For complete warranty policy information, please visit <http://www.phonic.com>.

CUSTOMER SERVICE AND TECHNICAL SUPPORT

We encourage you to visit our online help at <http://www.phonic.com/help/>. There you can find answers to frequently asked questions, tech tips, driver downloads, returns instruction and other helpful information. We make every effort to answer your questions within one business day.

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